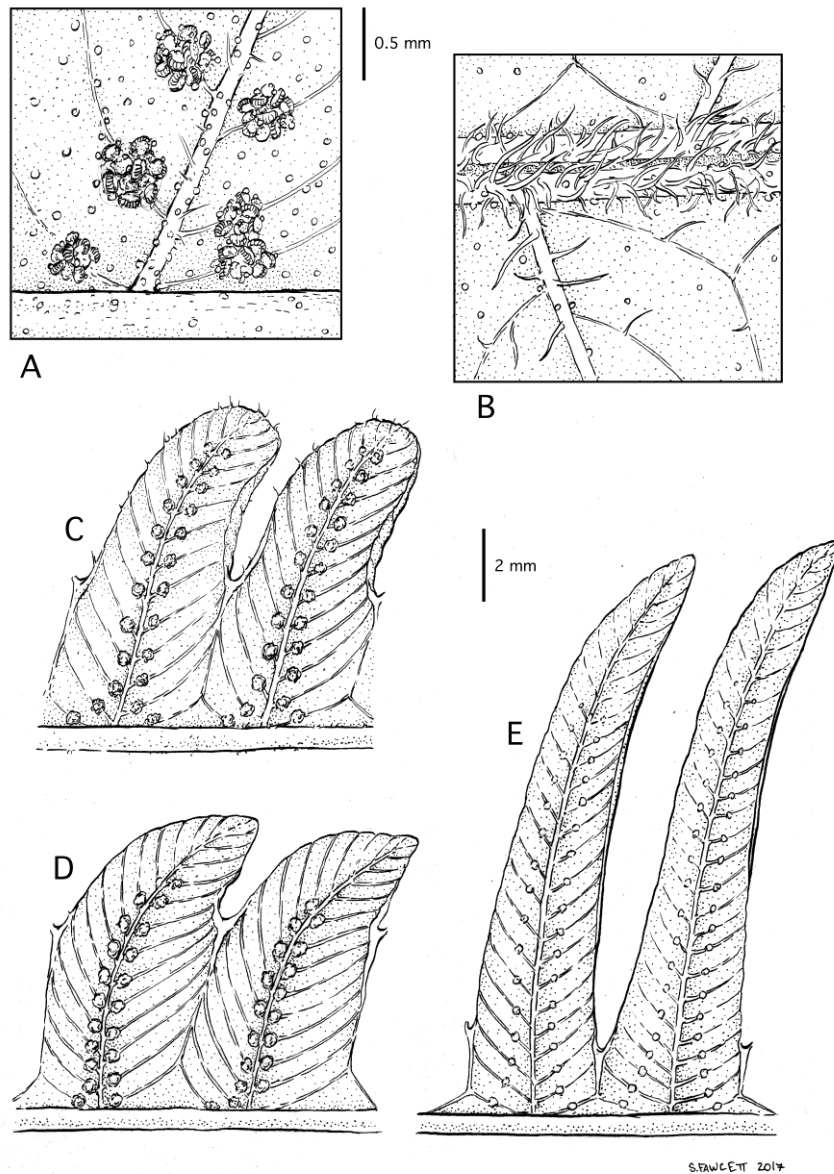


Annual Review of Pteridological Research



Volume 32 (2018)

ANNUAL REVIEW OF PTERIDOLOGICAL RESEARCH

VOLUME 32 (2018 Publications)

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Cover illustration: *Chingia fijiensis* Game, S.E. Fawcett & A.R. Smith. A new species illustrated by Susan Fawcett and published in John C. Game, Susan E. Fawcett & Alan R. Smith (2018). New pteridophyte records for Taveuni (Fiji) and a new species of *Chingia* (Thelypteridaceae). *New Zealand Journal of Botany*, 56(1): 26-37.

INTRODUCTION

This volume of the *Annual Review of Pteridological Research* (ARPR) provides a list of 690 literature citations on ferns and lycophytes published in 2018, a comprehensive index to authors (over 2200!) and keywords, and a description of research interests and contact information of pteridologists who answered our annual questionnaire.

In 2018, research on ferns and lycophytes continued to yield important worldwide contributions. There are numerous papers, with broad scope, in the areas of floristics, genomics, taxonomy, physiology, reproductive biology, ecology, environmental biology, paleobotany, palynology, and medicine. We hope that you will quickly find references within your own field of research and/or personal interest. We also hope that continued publication of ARPR will enhance access to information published about ferns and lycophytes and stimulate further collaboration among pteridologists worldwide.

Of note this past year is the transition in leadership of the International Association of Pteridologists. I want to personally thank outgoing officers Maarten Christenhusz (President), Jefferson Prado (Secretary), and Leticia Pacheco (Mexico) for their contributions, as well as all Council members listed on Page 1. I look forward to working with the new officers to ensure that IAP and the ARPR are serving the needs of its members and the greater community of lycophyte and monilophyte enthusiasts.

I also want to thank Jenna Canfield, at the University of Missouri, who among other important tasks took a lead role in the compilation of the literature citations for this volume of the ARPR.

If you are not on our mailing list but would like to receive information about how to be included in future issues, or if you would like to obtain back issues of the ARPR please contact Elisabeth A. Hooper, IAP Treasurer, Biology Department, Truman State University, 100 E Normal Street, Kirksville MO 63501-4221 USA, (iapferns@gmail.com). On-line access to the literature from back issues is available on the website of the American Fern Society (www.amerfernsoc.org).

Elisabeth Hooper,
Treasurer, IAP

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Patrick J. Acock	Phylogeny of <i>Asplenium</i> and most aspects of <i>Equisetum</i> research
Ruth Agurajua	Population biology and restoration ecology of endangered fern species
Thaís Elias Almeida	Systematics and evolutionary biogeography of ferns and lycophytes, with emphasis in Thelypteridaceae and neotropical Polypodiaceae and Schizaeaceae
Victor B. Amoroso	Botany; Economic ferns; Histochemical studies (medicinal ferns); Philippine <i>Cycas</i> ; Morphology and taxonomy
Sayuri Ando	Fern sporophyte development
Raju Antony	Systematic studies of <i>Selaginella</i> ; Ferns and conservation of ferns
Ralph C. Archer	Fern horticulture
Nan Crystal Arens	Ecology of tree ferns
Monanjali Bandyopadhyay	Phyto-geography; Ecology; Fern lore; Ethnobotany
Yasmin S. Baksh-Comeau	Vascular flora of Trinidad and Tobago
Julie F. Barcelona	Philippine ferns/floristics; Ecology and conservation; <i>Odontosoria</i> systematics; Philippine <i>Rafflesia</i>
H. Wilfried Bennert	Ferns and lycopods
Subir Bera	Animal interaction with pteridophytes and its co-evolutionary significance
Kamlesh Bhakuni	Biodiversity, taxonomy and morphology of Central Himalayan ferns
Rodica Bercu	Histo-anatomy of ferns
Michel Boudrie	Pteridophytes of France and of the Guianas (systematics, taxonomy, ecology, distribution)
Siegmar W. Breckle	Ecosystems of the Earth; Ecology of halophytes; Tropical ecology; Desert ecology
Jian Guo Cao	Sexual reproduction and development of fern gametophytes
James D. Caponetti	Propagation of ferns by tissue culture
Kalyan Chakraborti	Phyto-geography; Ecology; Fern lore; Ethnobotany
Chun-Ming Chen	Tropical plant conservation
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Maarten Christenhusz	Classification; Floristics; Genome size; Island biogeography; Taxonomy; Zoological Journal of the Linnean Society (Chief Editor); Botanical Journal of the Linnean Society (Adjunct Chief Editor); Phytotaxa (Founder and Associate)
Marten W. de Boer	Pteridophytes of Bolivia and East Africa; Herbarium specimen collection
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Franz-Georg Dunkel	Rare ferns; Ecology and population biology

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A. Murray Evans	Pteridophytes of the eastern United States; Taxonomy; Ecology; Natural History
Donald R. Farrar	Fern reproduction; <i>Botrychium</i> systematics
Kathryn Flinn	Ecology
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Christopher R. Fraser-Jenkins	Taxonomy; Floristics; Himalayan and all Asian ferns; <i>Asplenium</i> , <i>Athyrium</i> , <i>Cheilanthes</i> , <i>Diplazium</i> , <i>Dryopteris</i> , <i>Polystichum</i> , <i>Pteris</i> ; Nepal; Sri Lanka; Assam; Flora of Pakistan; Bangladesh; China; Myanmar; Tibet; Bhutan
Stephen C. Fry	Cell wall polysaccharides and enzymes; <i>Equisetum</i> tissue culture (callus)
Mary Gibby	Evolution and speciation in ferns; Fern conservation
Arthur V. Gilman	Lycopodiaceae; Ophioglossaceae; Systematics of temperate ferns and allies
Hit Kishore Goswami	Population cytogenetics of <i>Isoetes</i> and <i>Ophioglossum</i> ; Pteridophytes as medicinal plants
Gary K. Greer	Phenotypic plasticity; Polyploidy; Reproductive Ecology; Community assembly; Antheridiogen; Allelopathy
Irina I. Gureyeva	Taxonomy; Morphology; Biology of ferns of Siberia and Russia, especially taxonomy of <i>Pteridium</i> and morphology of the fern spores
Christopher H. Haufler	Patterns and processes of fern evolution; Application of chromosomal, isozymic and DNA data bases in characterizing fern species; Understanding speciation mechanisms and phylogenetic relationships; The significance of polyploidy in pteridophyte evolution
Andreas Hemp	Vegetation ecology
Elisabeth A. Hooper	Fern systematics; <i>Aleuritopteris</i>
Karsten Horn	Biosystematics, ecology, population biology and distribution of <i>Diphasiastrum</i> and <i>Botrychium</i> species in Europe; Bibliography of Macaronesian pteridophytes; Conservation strategies for endangered German pteridophytes; Monograph of the genus <i>Diphasiastrum</i>
Kunio Iwatsuki	Flora of East and Southeast Asia; Hymenophyllaceae; Conservation
Masahiro Kato	Tropical fern flora; Morphological evolution of vascular plants; Speciation and adaptation of rheophytes; Evolution of apogamous ferns
Michael Kessler	Biodiversity and biogeography of Bolivian montane forests, including pteridophytes; Flora of Bolivian pteridophytes
S.P. Khullar	Fern floristics; Taxonomy; Cytology and morphology
Johanna H.A. van Konijnenburg-van Cittert	Evolution of fossil fern families, especially Dipteridaceae
Yves Krippel	Distribution of pteridophytes in Luxembourg
Siro Kurita	Speciation; Karyotype evolution; Systematics

Brij Lal	Inventory, conservation, and documentation of pteridophyte-associated traditional knowledge of Indian Himalayan region in particular
Marco Landi	Population ecology
Marcus Lehnert	Taxonomy, phylogeny, ecology and biogeography of pteridophytes; Special expertise in tree ferns
Illia Leitch	Evolution of genome size and karyotype diversity in plants
Blanca León	Taxonomy of neotropical Polypodiaceae, Andes and Peruvian ferns
Bai-Ling Lin	Development; Hormone signaling; Genomics
Stuart Lindsay	Pteridophytes of Thailand, Laos and Cambodia; Vittariaceae of Southeast Asia; Gametophyte biology/ecology; Multi-access keys
David H. Lorence	Pteridophytes of Polynesia, Micronesia, Mascarenes
Kay Lynch	Propagation and conservation of Hawaiian native ferns
P.V. Madhusoodanan	Pteridophytes and bryophytes of South India; <i>Azolla</i> species and Cyanobacteria as biofertilizers
Peter Mani	<i>Salvinia</i> ; Ornamental ferns
Fernando Matos	Taxonomy, biogeography, phylogeny and evolution of <i>Elaphoglossum</i>
Sadamu Matsumoto	Cytotaxonomic study of ferns, especially <i>Cyrtomium</i> , <i>Asplenium</i> , and <i>Pteris</i> ; Pteridophyte flora of Southern Pacific Islands, Bhutan, Taiwan
J. Mitchell McGrath	Plant breeding; Molecular cytogenetics; Gene duplication
Klaus Mehlreter	Fern ecology; Phenology; Herbivory; Interactions with insects; Invasive species
Aniceto Mendoza Ruiz	Pteridophytes of Mexico; Taxonomy, floristics, cultivation and propagation of ferns
Jordan Metzgar	<i>Cryptogramma</i> ; Phylogenetics; Polyploidy; <i>Azolla</i> ; Osmundaceae
Vlastimil Mikolas	<i>Polypodium</i> ; <i>Asplenium trichomanes</i> agg.; <i>Dryopteris</i> ; <i>Equisetum</i> and ferns of Oceania
Robbin C. Moran	Taxonomy, biogeography, phylogeny and evolution of ferns and lycophytes
Claudine C. Mynssen	<i>Diplazium</i> ; Brazilian flora
Narumi Nakato	Chromosomes; Polyploidy; Hybridization; Speciation
Maite Niño	Selaginellaceae; Lycopodiaceae; Polypodiaceae (including Grammitidaceae); Fern culture; Ecology
Benjamin Øellgaard	Systematics and biology of the Lycopodiaceae with special reference to neotropical Lycopodiaceae; Pteridophytes of the northern Andes, especially Ecuador; Biology; Taxonomy and diversity; Quantitative inventories of pteridophytes in sample plots in Ecuador
Sue Olsen	Testing ferns for hardiness and ornamental value and introducing ferns to the public
Leticia Pacheco	Systematics of <i>Diplazium</i>

Christopher Page	Biology and ecology of Pteridophyta; Biogeography; Distribution; Insular floras; Paleobotany; <i>Equisetum</i> ; Patterns, principles, processes and dynamics in pteridophyte ecosystems and their evolution
Santiago Pajarón	Reproductive biology; Population genetics; Systematics and evolution
Barbara Parris	Monographic studies of Grammitidaceae; Systematics, ecology and phytogeography of Old World pteridophytes particularly in tropical and south temperate regions
Alison Paul	Pteridophyte curation; Macaronesian and European pteridophytes
James H. Peck	Pteridophyte flora of Arkansas
Ana L. Pereira	Biological activity of extracts; Plant-cyanobacteria symbioses; Phylogeny; Cyanotoxins; Proteomic, phytoremediation, ecotoxicology of plants by cyanotoxins
Krzysztof Piątek	Fern biogeography
Jefferson Prado	Phylogeny, nomenclature, taxonomy, and geographical distributions of Pteridaceae; Pteridoflora in Brazil
Kathleen Pryer	Phylogenetics of ferns and basal tracheophytes using morphological and molecular data; Systematics of basal fern families, especially Marsileaceae, Hymenophyllaceae, tree ferns, pteroid ferns, ontogeny and phylogeny; Morphometrics
N. Punetha	Morphology, taxonomy and biodiversity of Central Himalayan ferns and lycophytes
Anshita Raj	Phytoremediation; Arsenic; <i>Pteris vittata</i> gametophytes
K.P. Rajesh	Ecology, taxonomy and conservation of bryophytes and pteridophytes of Western Ghats
R.G.H. Ranil	Tree ferns
Tom A. Ranker	Systematics, ecology and evolution of tropical ferns
Gar W. Rothwell	Phylogeny of land plants
Kai Runk	Comparative biology and ecology of Estonian <i>Dryopteris</i> ; Cultivation of hardy ferns in Estonia, especially <i>Polystichum</i> and <i>Phyllitis scolopendrium</i> and their cultivars; Hardy East Asian fern species
Arthur E. Salgado	Taxonomy of Southeast Asian ferns; the genus <i>Asplenium</i> in the Philippines
Annette Schoelch	Construction morphology; Development of the sporophyll, sporangia, and sori in ferns; Evolution and phylogeny of ferns
Eric Schuettpelz	Evolution, diversification and systematics of pteridophytes, especially the leptosporangiate fern family Pteridaceae
David Schwartz	Cheilanthoid ferns
Kakali Sen	Evolutionary biology of ferns and lycophytes

B.D. Sharma	Morphology, anatomy, phytochemistry and experimental studies on pteridophytes; Paleobotany of Mesozoic and tertiary plants
Joanne M. Sharpe	Tropical and temperate fern life histories; Long-term studies of demography of tropical pteridophytes; Ecology of rheophytes and New England ferns
Judith E. Skog	Fern evolution and phylogeny, especially basal ferns - Osmundaceae, Schizaeaceae, Matonianaceae; Relationships with fossil ferns
Alan R. Smith	Phylogeny of pteridophytes; Phylogeny of Polypodiaceae/Grammitidaceae; Floristics of Mexican, Venezuelan and Bolivian ferns and allies; Phytogeography of ferns
V.K. Sreenivas	Molecular phylogeny; Taxonomy; <i>Pteris</i>
Alejandra Vasco	Neotropical pteridophyte taxonomy; <i>Elaphoglossum</i>
Olena V. Vasheka	Fern introduction, cultivation of temperate-zone ferns in Ukraine; Pteridophyte conservation
David H. Wagner	Ferns of the Pacific Northwest; <i>Polystichum</i> ; <i>Botrychium</i> ; Photomicrography
Yasuyuki Watano	Speciation; Apogamy; Intragametophytic selfing
James E. Watkins, Jr.	Fern ecology; Ecophysiology; Reproductive/gametophyte biology
Richard A. White	Vascular plant anatomy and morphology; Systematics and anatomy of the tree ferns (Dicksoniaceae and Cyatheaceae) and allies
Kenneth A. Wilson	Hawaiian alien ferns; Pteridophyte sporangial morphology
Michael D. Windham	Cytology and phylogeny of ferns; Chelanthoid ferns
Paul Wolf	Molecular systematics; Population genetics; Fern phylogeny
George Yatskievych	Systematics of cheilanthoid ferns; Floristics of US (especially Missouri) and Mexico; Conservation
Xian-Chun Zhang	Ferns of the Himalayan region and Southeast Asia
Aurora Zlotnik	Fern anatomy; Plant stomata

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